

Squid Fishery Management Plan Table of Contents

Chapter 1. Introduction

- 1.1 Purpose and Need for Action
 - 1.1.1 Location and General Characteristics of the Project Area
 - 1.1.2 Problem Statement
- 1.2 The Marine Life Management Act
 - 1.2.1 Goals and Objectives Defined Under Marine Life Management Act
 - 1.2.2 Process of Plan Review
 - 1.2.3 Process for Plan Amendment
- 1.3 Specific Goals and Objectives of the Market Squid Fishery Management Plan
 - 1.3.1 Constituent Involvement
 - 1.3.1.1 Public Consultation for Definition of Plan Goals and Objectives
 - 1.3.1.2 Public Consultation for Selection of Preferred Management Alternative
- 1.4 Authority and Responsibility
 - 1.4.1 California Environmental Quality Act (CEQA)
 - 1.4.1.1 Functional Equivalent
 - 1.4.1.2 Use of the Environmental Document
 - 1.4.1.3 Use of the Environmental Document
 - 1.4.2 Federal Law
- 1.5 Current Management of Market Squid
 - 1.5.1 Legislative Responsibilities
 - 1.5.2 Fish and Game Commission Responsibilities
 - 1.5.2.1 Commercial Fisheries
 - 1.5.2.2 Rulemaking Process under the Administrative Procedures Act

Chapter 2. Description of Stocks

- 2.1 Species Description
- 2.2 Distribution, Stock Biomass, Genetic Stock Structure, and Migration
- 2.3 Age and Growth
- 2.4 Reproduction, Seasonality, and Fecundity
- 2.5 Natural Mortality
- 2.6 Disease
- 2.7 Predator/Prey Relationships

- 2.8 Competition
- 2.9 Critical Habitat
- 2.10 Status of the Stocks

Chapter 3. Description of the Fishery

- 3.1 Areas and Stocks Involved
- 3.2 History of Exploitation
 - 3.2.1 Description of User Groups
 - 3.2.1.1 Commercial Fishery
 - 3.2.1.2 Recreational Fishery
 - 3.2.2 Fishing Effort
 - 3.2.2.1 Commercial Fishing Effort
 - 3.2.2.2 Recreational Fishing Effort
- 3.3 Social and Economic Characteristics of the Fishery
 - 3.3.1 Commercial Sector Socioeconomics
 - 3.3.2 Recreational Fishing Effort
 - 3.3.3 Fishery Impacts

Chapter 4. History of Conservation and Management Measures

- 4.1 Regulatory History
- 4.2 Estimation of MSY and/or OY
 - 4.2.1 Disapproved MSY Proxy Alternatives
 - 4.2.1.1 MSY Based on Historical Landings
 - 4.2.1.2 MSY Based on Expanding California Catch Data
 - 4.2.1.3 MSY Based on Coastwide Expansion from Midwater Trawl Data
 - 4.2.2 The Preferred Option: MSY Based on Egg Escapement
 - 4.2.3 Overfished Condition Based on Egg Escapement
 - 4.2.4 Allowable Biological Catch Alternatives Considered
 - 4.2.5 Allocation Issues
 - 4.2.6 CPS FMP
- 4.3 Other Conservation of Stocks

Chapter 5. Fishery Management Program

- 5.1 Potential Management Measures
- 5.2 Definition of Maximum Sustainable Yield and Optimum Yield
- 5.3 General Fishery Management Plan Framework
 - 5.3.1 Plan Amendment
 - 5.3.2 Framework Actions
 - 5.3.3 Routine Management Measures
- 5.4 Market Squid FMP Framework
 - 5.4.1 Points of Concern Process

- 5.4.2 Socioeconomic Process
- 5.4.3 Harvest Control Rules
- 5.5 Trigger Mechanisms
- 5.6 Management Alternatives

Chapter 6. Project Alternatives

- 6.1 Market Squid Resource Protection Issues
 - 6.1.1 Problem Statement
 - 6.1.2 Catch Limitations
 - 6.1.2.1 Seasonal Statewide Catch Limitation
 - 6.1.2.2 Daily Trip Limit for Market Squid Vessels and Brail Vessels
 - 6.1.3 Existing Weekend Closure
 - 6.1.4 Research and Monitoring Program
 - 6.1.4.1 Egg Escapement Monitoring of Fishery
 - 6.1.4.2 Sampling and Survey Program
 - 6.1.4.3 Logbook Program
 - 6.1.5 Area Closure for Squid Harvest Replenishment
 - 6.1.6 Live Bait Fishery and Incidental Catch of Market Squid
- 6.2 Market Squid Socio-economic Concerns
 - 6.2.1 Problem Statement
 - 6.2.2 Restricted Access - Limited Entry Program
 - 6.2.2.1 Background
 - 6.2.2.2 Summary of Commission Policy and Guidelines
 - 6.2.2.3 Rationale for Implementation
 - 6.2.2.4 Scope of Limited Entry
 - 6.2.2.5 Capacity Goal
 - 6.2.2.5.1 Capacity Goal Background
 - 6.2.2.6 Initial Issuance Criteria
 - 6.2.2.6.1 Background
 - 6.2.2.6.2 Recommended Permit Issuance Guidelines
 - 6.2.2.6.3 Issuance of Initial Permits
 - 6.2.2.6.4 SFAC Recommendations for Initial Issuance
 - 6.2.2.7 Transferability of permits
 - 6.2.2.8 Transferability Fee Structure
- 6.3 Ecological Concerns
 - 6.3.1 Problem Statement
 - 6.3.2 Gear Restrictions
 - 6.3.2.1 Light Gear
 - 6.3.2.2 Other Gear
 - 6.3.3 Seabird Rookeries
 - 6.3.3.1 Background
 - 6.3.3.2 Brown Pelican Productivity
 - 6.3.3.3 Department Light Study
 - 6.3.3.4 Results
- 6.4 Other Actions

- 6.4.1 Advisory Committee for Squid Fishery
- 6.4.2 Permit Fees

Chapter 7. Analysis of Proposed Management Alternatives

- 7.1 Proposed Project and Rationale
 - 7.1.1 Seasonal Statewide Catch Limitation
 - 7.1.2 Daily Trip Limits for Market Squid Vessels and Brail Vessels
 - 7.1.3 Weekend Closures
 - 7.1.4 Research and Monitoring Program
 - 7.1.5 Harvest Replenishment Areas
 - 7.1.6 Live Bait Fishery and Incidental Catch of Market Squid
 - 7.1.7 Market Squid Fleet Capacity
 - 7.1.8 Issuance of Initial Permits
 - 7.1.9 Permit Transferability
 - 7.1.10 Transferability Fee Structure
 - 7.1.11 Gear Restrictions
 - 7.1.12 Area and Time Closures to Address Seabird Issues
 - 7.1.13 Advisory Committee
 - 7.1.14 Permit Fees
- 7.2 Impacts of the Proposed Actions
 - 7.2.1 Squid Resource Impacts
 - 7.2.1.1 Seasonal Landing Limit
 - 7.2.1.2 Daily Trip Limits
 - 7.2.1.3 Weekend Closures
 - 7.2.1.4 Research and Monitoring Programs
 - 7.2.1.4.1 Egg Escapement Method
 - 7.2.1.4.2 Squid Research and Monitoring Programs
 - 7.2.1.4.3 Logbooks
 - 7.2.1.5 Harvest Replenishment Areas
 - 7.2.1.6 Live Bait Fishery and Incidental Take of Market Squid
 - 7.2.1.7 Restricted Access Program
 - 7.2.1.8 Gear Restrictions
 - 7.2.1.9 Seabird Rookeries
 - 7.2.1.10 Advisory Committee for Squid Fishery
 - 7.2.1.11 Annual Permit Fee
 - 7.2.2 Socioeconomic Impacts
 - 7.2.2.1 Seasonal Landing Limit
 - 7.2.2.2 Daily Trip Limits
 - 7.2.2.3 Weekend Closures
 - 7.2.2.4 Research and Monitoring Programs
 - 7.2.2.5 Harvest Replenishment Areas
 - 7.2.2.6 Live Bait Fishery and Incidental Take of Market Squid
 - 7.2.2.7 Restricted Access
 - 7.2.2.7.1 Capacity Goal
 - 7.2.2.7.2 Initial Issuance

PRELIMINARY DRAFT MARKET SQUID FISHERY MANAGEMENT PLAN

DATED: 15 MAY 2002

- 7.2.2.7.3 Permit Transferability and Transferability Fee
- 7.2.2.7.4 No Restrictive Access Program
- 7.2.2.8 Gear Restrictions
- 7.2.2.9 Seabird Rookeries
- 7.2.2.10 Advisory Committee for Squid
- 7.2.2.11 Annual Permit Fee
- 7.2.3 Other Ecological Concerns
 - 7.2.3.1 Trophic Interactions
 - 7.2.3.1.1 Finfish
 - 7.2.3.1.1.1 Salmonids
 - 7.2.3.1.1.2 Analysis of Impacts
 - 7.2.3.1.1.3 Other Management Options
 - 7.2.3.1.2 Invertebrate Species
 - 7.2.3.1.3 Seabirds
 - 7.2.3.1.3.1 Endangered Species Act (ESA), Migratory Bird Treaty Act, and Other Status Considerations
 - 7.2.3.1.3.2 Affected Environment
 - 7.2.3.1.3.3 California Brown Pelican
 - 7.2.3.1.3.4 Terns, Skimmers, and Gulls
 - 7.2.3.1.3.5 Alcids
 - 7.2.3.1.3.6 Storm-petrels
 - 7.2.3.1.3.7 Cormorants
 - 7.2.3.1.3.8 Loons
 - 7.2.3.1.3.9 Albatrosses, Fulmars, and Shearwaters
 - 7.2.3.1.3.10 Bald Eagle
 - 7.2.3.1.3.11 Plovers
 - 7.2.3.1.3.12 Environmental Consequences of Proposed Actions on Marine and Coastal Birds
 - 7.2.3.1.3.12.1 “No Project or Status Quo” (Current Regulations)
 - 7.2.3.1.3.13 Significance Criteria for Marine and Coastal Birds for the Proposed Management Options
 - 7.2.3.1.3.14 Alternatives (Management Measures)
 - 7.2.3.1.3.14.1 Limited Entry Alternative
 - 7.2.3.1.3.14.2 Harvest Replenishment Areas (Marine Protected Areas) Alternative
 - 7.2.3.1.3.14.3 Options for area and time closure to address seabird issue
 - 7.2.3.1.3.14.4 Weekend Closures
 - 7.2.3.1.3.14.5 Catch Limitation Option
 - 7.2.3.1.3.14.6 Commercial Gear Restrictions Option
 - 7.2.3.1.3.14.7 Other Management Options
 - 7.2.3.1.4 Marine Mammals
 - 7.2.3.1.4.1 ESA and MMPA Considerations
 - 7.2.3.1.4.2 Current Fishery Categories

PRELIMINARY DRAFT MARKET SQUID FISHERY MANAGEMENT PLAN

DATED: 15 MAY 2002

7.2.3.1.4.3 Marine Mammals in California Waters

7.2.3.1.4.4 Cetaceans

7.2.3.1.4.4.1 Humpback Whale

7.2.3.1.4.4.2 Northern Right Whale

7.2.3.1.4.4.3 Sperm Whale

7.2.3.1.4.4.4 Sei Whale

7.2.3.1.4.4.5 Fin Whale

7.2.3.1.4.4.6 Blue Whale

7.2.3.1.4.4.7 Gray Whale

7.2.3.1.4.4.8 Harbor Porpoise

7.2.3.1.4.4.9 Risso's Dolphin

7.2.3.1.4.4.10 Short-finned Pilot Whale

7.2.3.1.4.4.11 Bottlenose Dolphin

7.2.3.1.4.4.12 Pacific White-sided Dolphin

7.2.3.1.4.4.13 Dall's Porpoise

7.2.3.1.4.5 Pinnipeds

7.2.3.1.4.5.1 Steller (Northern) Sea Lion

7.2.3.1.4.5.2 Northern Fur Seal

7.2.3.1.4.5.3 Guadalupe Fur Seal

7.2.3.1.4.5.4 Northern Elephant Seal

7.2.3.1.4.5.5 Pacific Harbor Seal

7.2.3.1.4.5.6 California Sea Lion

7.2.3.1.4.6 Southern Sea Otter

7.2.3.1.4.7 Environmental Consequences of
Proposed Actions

7.2.3.1.4.7.1 "No Project or Status Quo"
(Current Regulations)

7.2.3.1.4.7.2 Direct Effects of the "No Project
or Status Quo" on Cetaceans

7.2.3.1.4.7.3 Indirect Effects of the "No Project
or Status Quo" on Cetaceans

7.2.3.1.4.7.4 Direct Effects of the "No Project
or Status Quo" on Pinnipeds and Sea Otters

7.2.3.1.4.7.5 Indirect Effects of the "No Project
or Status Quo" on Pinnipeds and Sea Otters

7.2.3.1.4.8 Significance Criteria for Pinnipeds and
Cetaceans for the Proposed Management Options

7.2.3.1.4.9 Significance criteria for the Southern Sea
Otter

7.2.3.1.4.10 Alternatives (Management Measures)

7.2.3.1.4.10.1 Limited Entry Alternative

7.2.3.1.4.10.2 Catch Limitations Alternative

7.2.3.1.4.10.3 Time (Season)/Area Closure
Alternative

7.2.3.1.4.10.4 Harvest Replenishment Areas
(Marine Protected Areas) Alternative

- 7.2.3.1.4.10.5 Commercial Gear Restrictions
Alternative
- 7.2.3.1.4.10.6 Other Management Options
- 7.2.3.1.5 Incidentally-taken Species
- 7.2.3.1.6 Marine Turtles
 - 7.2.3.6.1.1 Marine Turtles in California Waters
 - 7.2.3.1.6.2 Analysis of Impacts
- 7.2.3.1.7 Habitat Impacts
 - 7.2.3.1.7.2 Sanctuaries
- 7.2.3.1.8 Effects of Consumptive Use on Environment
- 7.2.3.1.9 Effects of Nonconsumptive Use on Environment

Chapter 8. Fishery Research Protocols

- 8.1 Essential Fishery Information
 - 8.1.1 Grouping Essential Fishery Information
- 8.2 Past and Ongoing Monitoring of the Commercial Fishery
 - 8.2.1 Past Fishery-Dependent Monitoring
 - 8.2.2 Problems with Past and Ongoing Fishery-Dependent Monitoring
 - 8.2.3 Past Fishery Independent-Research
 - 8.2.4 Problems with past and Ongoing Fishery Independent-
- 8.3 Current Knowledge of Essential Fishery Information
- 8.4 Research Needed to Obtain Essential Fishery Information
- 8.5 Steps to Monitor the Fishery and Obtain Essential Fishery Information

Chapter 9. Implementation Requirements

- 9.1 Enforcement
- 9.2 Data Collection and Reporting Requirements

Chapter 10. Other Ecological Concerns

- 10.1 Unusual Weather Events
- 10.2 Water Quality
 - 10.2.1 Municipal Discharge
 - 10.2.2 Dredge and Non-dredge Material Disposal
 - 10.2.3 Coastal Shipyards and Industrial Pollutants
 - 10.2.4 Fuel Use
- 10.3 Air Quality
- 10.4 Importance of Habitat Loss, Degradation, and Modification
 - 10.4.1 Coastal Development and Land Use
 - 10.4.2 Gear Use in the Marine Environment
 - 10.4.3 Noise Effects in the Marine Environment